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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,520	10/12/2001	Gardner S. Haynes	33539US1	2626

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PEARNE & GORDON LLP  
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EXAMINER
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ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

0205

**Office Action Summary**

Application No.

09/976,520

Applicant(s)

HAYNES ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## SECOND OFFICE ACTION

### *Response to Amendment*

1. This Office Action is in response to Amendment "A" received August 25, 2003. Claims 1-48 are pending in this application.

### *Claim Rejections - 35 USC § 112, First Paragraph*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

4. Applicants have created a range of initial thickness of the cladding of "at least 0.012 inches" (e.g. see independent claim 1, last two lines; independent claim 23, last two lines).

While there appears to be specific support for such an aluminum cladding at the lower endpoint of this range (e.g. see Table 1), it is not clear where support for such a copper cladding can be

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found in the original disclosure. In addition, applicants have created an open ended upper part of the range "at least 0.012 inches" and it is not clear where support can be found for the open ended upper part of this range.

5. Applicants have created new ranges for the nickel content of the copper and nickel containing alloy (e.g. see "comprising nickel in a proportion of 10% to 28%" in independent claim 2 and independent claim 35; "20% to 28% nickel" in claims 20 and 37). Applicants have the burden of establishing for the record on how these new ranges were envisaged by the original disclosure. While it is noted that a broader nickel content range (e.g. 10%-40%) was originally disclosed and the newly presented ranges fall within the original range, applicants have not established on the record whether the broader range describes the narrower range. See *In re Wertheim, et al.*, 191 USPQ 90 (CCPA 1976).

6. Applicants have added the new limitation "the cladding being essentially free of zinc" (e.g. claim 2, line 6; claim 48). It is not clear where support for a limitation of this particular scope can be found in the original disclosure. While it is noted that the original disclosure discusses that zinc in the copper alloy "will be avoided" (e.g. see paragraph spanning pages 12 and 13), this is not the same scope as "essentially" free of zinc.

***Claim Rejections - 35 USC § 112, Second Paragraph***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 1-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The claims contain conflicting language since they use "consisting essentially" to describe the composition of the cladding and then subsequently further use "comprising" to describe the composition of the cladding. Since "comprising" further opens up the composition to additional additives regardless of whether they affect the basic and novel characteristics of the invention, it conflicts with a prior use of "consisting essentially". Applicant should carefully review the claims and correct the conflicting language wherever it occurs (e.g. see claim 2, "consisting essentially" on lines 2-3, followed by "comprising" on line 6; claim 1 which provides for a cladding "consisting essentially of copper and aluminum" on lines 2-3, followed by dependent claim 4 which "comprises" layers of copper and aluminum; claim 23 which has a cladding "consisting essentially" of copper and aluminum, followed by dependent claim 24 which "comprises" aluminum; etc. . .). The term "comprising" leaves the claims open for the inclusion of unspecified ingredients even in major amounts, *Ex parte Davis, et al.*, 80 USPQ 448 (PTO Bd. App. 1948). The term "consisting essentially of" allows for additional alloying constituents which do not affect the basic and novel characteristics of the invention, *Ex parte Davis, et al.*, 80 USPQ 448 (PTO Bd. App. 1948); *In re Janakirama-Rao*, 137 USPQ 893 (CCPA 1963).

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 2 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller (U.S. Patent 3,750,253) or Heronemus (U.S. Patent 4,497,363).

12. Miller discloses cladding a copper alloy (containing 15-75 percent nickel) on a core of steel (e.g. see column 3, lines 24-27). This cladding can be done by roll bonding (e.g. see column 3, lines 51-60). Miller's layered composite meets all the physical limitations required by the rejected claims. The melting point of the cladding is lower than the melting point of the core material. Heronemus discloses cladding a copper-nickel alloy (e.g. copper alloy 715) on a substrate of steel (e.g. see column 6, lines 16-36), but also clearly teaches that 90-10 cupro-nickel is considered appropriate for the copper-nickel alloys of his invention (e.g. see column 11, lines 9-14). Heronemus's layered composite meets all the physical limitations required by the rejected claims. The melting point of the cladding is lower than the melting point of the core material. Although it is noted that Miller or Heronemus may not intend for his composites to be brazed, the compositions of the composites meet the physical limitations required by the claims and therefore would inherently be capable of meeting applicant's intended use. Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are

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identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

13. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota (Japanese publication 56-095479).

14. Kubota discloses cladding a copper-aluminum alloy on steel (e.g. see abstract and entire article). Particularly note the copper and aluminum layer thicknesses in the left hand column of page 383. The melting point of the cladding is lower than the melting point of the steel material. Although it is noted that Kubota may not intend for his composites to be brazed, the composition of the composite meets the physical limitations required by the claims and therefore would inherently be capable of meeting applicant's intended use. Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess

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characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 3-17, 23-34 and 42-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forand (U.S. Patent 3,912,152).



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17. Forand discloses roll cladding pure aluminum and/or pure copper or their alloys (e.g. see column 4, lines 26-31) on one or both surfaces of a ferrous substrate (e.g. see column 2, lines 23-30). Typical thicknesses of the claddings and substrate are disclosed (e.g. see column 3, lines 18-22). The melting point of the cladding is lower than the melting point of the core material (e.g. see column 2, lines 45-62). Forand may differ from the claims in that no specific working example of a copper and aluminum combination on both sides of the ferrous substrate may be set forth, but it would have been obvious to one of ordinary skill in the art at the time the invention was made that Forand's disclosure is intended to cover using aluminum and copper combinations on each side of a ferrous substrate since Forand specifically refers to "copper and/or aluminum" claddings on either one or both sides of the ferrous substrate. Regarding claims to specific layer thicknesses, Forand gives various guidelines for layer thicknesses, and it would have been obvious to one of ordinary skill in the art to use any layer thicknesses within Forand's general guidelines. Since Forand is specific to ferrous substrates, it would be understood by one of ordinary skill in the art that any ferrous substrate material (e.g. carbon steel, stainless steel, tool steel, etc. . . ) could be used in practicing Forand's invention. Although it is noted that Forand may not intend for his composites to be brazed, the compositions of the Forand composite meet the physical limitations required by the claims and therefore would inherently be capable of meeting applicant's intended use. Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103,

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jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Regarding limitations regarding the brazing temperatures of the composite, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use whatever brazing temperatures are necessary to perform brazing depending on the specific alloys that would be useable in the composites of Forand and also for the amount of dwell time of the brazed article in the furnace.

### ***Response to Arguments***

18. Applicant's arguments filed August 25, 2003 have been fully considered but they are not persuasive with regards to the remaining rejections.

19. Regarding the rejection of claims 2 and 3 under 35 U.S.C. 102(b) as being anticipated by Heronemus (U.S. Patent 4,497,363), applicant has established the new range of 10-28% nickel for the cladding layer. Applicants argue that there is no reason to modify the copper-nickel alloy of Heronemus to meet this limitation. The examiner notes, however, that while Heronemus does

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disclose cladding a copper-nickel alloy (e.g. copper alloy 715) on a substrate of steel (e.g. see column 6, lines 16-36), he also clearly teaches that 90-10 cupro-nickel is also considered appropriate for the copper-nickel alloys of his invention (e.g. see column 11, lines 9-14). Therefore, for Heronemus's teachings as a whole, there is clearly sufficient specificity for the teachings of using copper-nickel alloy claddings having 10% nickel to anticipate the claims.

20. Regarding the rejection of claims 2 and 3 under 35 U.S.C. 102(b) as being anticipated by Miller (U.S. Patent 3,750,253), applicants argue that the limitation "being essentially free of zinc" overcomes this reference since Miller uses nickel silver alloys comprising copper, nickel and zinc. The examiner notes, however, that Miller specifically teaches that "copper-nickel alloys containing from 15 to 70 percent nickel by weight and the balance copper" can be used in his invention place of nickel silver materials (e.g. see column 3, lines 24-27).

21. Regarding the rejection of claims 1 and 3 under 35 U.S.C. 102(b) as being anticipated by Kubota (Japanese publication 56-095479), applicants argue that the new limitation "said cladding having an initial thickness of at least 0.012 inches prior to being pressed" overcomes this reference. The examiner notes, however, that Kubota clearly uses aluminum and copper initial sheets in excess of 0.012 inches when making claddings (e.g. see the uses of 1.0 mm initial thickness aluminum and copper sheets in left hand column of page 383).

22. Regarding the rejection of the claims under 35 U.S.C. 103(a) as being unpatentable over Forand (U.S. Patent 3,912,152), applicant argues that that the new limitation "said cladding

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having an initial thickness of at least 0.012 inches prior to being pressed" overcomes this reference. It is noted that no patentable distinction has been established for the use of claddings of an initial thickness only 2 thousands of an inch different than the prior art (Forand teaches thicknesses up to 0.010 inches). All the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art even though the art teachings relied upon are phrased in terms of a non-preferred embodiment or even as being unsatisfactory for the intended purpose, *In re Boe*, 148 USPQ 507 (CCPA 1966); *In re Smith*, 65 USPQ 167 (CCPA 1945); *In re Nehrenberg*, 126 USPQ 383 (CCPA 1960); *In re Watanabe*, 137 USPQ 350 (CCPA 1963). In addition, the potential for "alligatoring" described by Forand for thicknesses over 0.010 inches is not excluded by the pending claims nor addressed by the applicants' disclosure. It appears that the applicants are simply performing methods similar to Forand's prior art method and accepting the potential flaws that Forand teaches will occur. It is not clear how applicant's method is patentably distinct from the method of Forand.

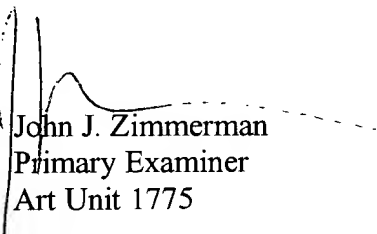
### ***Conclusion***

23. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the

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advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone number is (703) 872-9310. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz

November 12, 2003